

### REMARKS

In the Office Action, claim 12 was objected to. Claims 1-31, 33-38 and 40 were objected to. Claims 3-4 and 11 were rejected under 35 USC §112, first paragraph. Claims 1-28, 30-31, 33-35, 38 and 40 were rejected under 35 USC §112, second paragraph. Claim 29 was rejected under 35 USC §112, second paragraph. Claims 1-7, 9-28, 30-31 and 33-38 were rejected under 35 USC §102(a) and 35 USC §102(g) as being anticipated by Andrews et al. Claims 1-7, 9-28, 30-31 and 33-38 were rejected under 35 USC §102(f) in view of Andrews et al. Claims 1, 3-4, 12-15, 22, 30-31, 33-35 and 38 were rejected under 35 USC §102(b) as being anticipated by Tomohiro et al. Claims 1, 12-16, 18, 22, 30-31, 35 and 38 were rejected under 35 USC §102(b) as being anticipated by Kawanaka.

In response to the rejections in view of Andrews et al (WO 00/36413) in paragraphs 13 and 14 of the Office Action, this reference is not prior art. Andrews has a publication date of June 22, 2000, which is after the filing date of two of the New Zealand applications (July 30, 1999 and August 10, 1999) from which priority is claimed. The third priority application is a combination of the first two priority applications.

With respect to the other rejections based upon the Japanese references to Tomohiro and Kawanaka, only the abstract of these particular specifications are in the English language, a copy of which are enclosed. Applicant has been unable, for each of the

Japanese citations, to locate a non-Japanese language equivalent. There is no disclosure of that which is being claimed in the above mentioned Japanese references and any of the claims that depend thereon.

As interpreted by the Examiner in paragraph 15, Tomohiro et al discloses an apparatus dependent on "transformed data derived from time based echo data".

In the present application, the echo data is simply being detected and then using that part of the echo that forms part of the harmonics to derive, by a best fit spectral analysis, the value of the fundamental frequency. It is this fundamental frequency that is then used in conjunction with the length L to derive the indicator which is either the square of acoustic speed V or some function of the square of speed.

This same observation is made with the interpretation of Kawanaka et al. As stated by the Examiner in paragraph 16, "wherein said processing means tests algorithmically frequency transformed...derived from some time based echo data".

This dependence on the echo data as being produced as a function of time is different from that of the present application which derives the fundamental frequency by reference to spectral harmonics, and not time.

Whilst both methodologies determine the fundamental harmonic  $f_0$ , the method of deriving this value is fundamentally

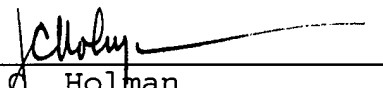
different between the two different methodologies as described in Tomohiro or Kawanaka and the present application.

Based on the foregoing amendments and remarks, it is respectfully submitted that the claims in the present application, as they now stand, patentably distinguish over the references cited and applied by the Examiner and are, therefore, in condition for allowance. A Notice of Allowance is in order, and such favorable action and reconsideration are respectfully requested.

However, if after reviewing the above amendments and remarks, the Examiner has any questions or comments, he is cordially invited to contact the undersigned attorneys.

Respectfully submitted,

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Date: December 9, 2003  
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8Title: JP11064306A2: APPARATUS FOR CLASSIFYING LOG

**Derwent Title:** Log grading apparatus for wooden material - has controller that performs strength count of log based on measured diameter, length and weight values Derwent Record

♣Country: JP Japan

**Kind:** A

**☞Inventor: ZUSHI TOMOHIRO;  
YAMASUMI TATSUYA;  
TOYA RYOTARO;  
MIYAMOTO KOICHI;  
SASAKI YUKIHISA;**

**Assignee: KAGOSHIMA PREF GOV  
YAMASA MOKUZAI KK**  
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**Published / Filed: 1999-03-05 / 1997-08-12**

**Application JP1997000217320**

**Number:**

IPC Code: G01N 29/12; G01N 3/30; G01N 33/46;

Priority Number: 1997-08-12 JP19971997217320

### Abstract:

**PROBLEM TO BE SOLVED:** To classify logs by strength, by measuring weights, diametrical classes, impacts and natural frequencies of the logs on the basis of signals from a controller part of a strength-sorting apparatus and calculating strengths of logs on the basis of the measured values.

**SOLUTION:** A log is raised and stabilized by a weight measurement first-stage cylinder at a position where the log is loaded on a log transfer wheel 3. The log is raised and a weight of the log is measured by a second-stage cylinder at a log-supporting plate fixed to a receiver instrument via a load cell. A length of a cut end of the log in a vertical direction is measured by a vertical direction diameter measurement bar, and a length in a horizontal direction is measured by a horizontal direction diameter measurement bar. The lengths are averaged, thereby obtaining a diameter. A striking apparatus 106 drives a hammer by a strike cylinder to hit the cut end of the log. A natural frequency-measuring apparatus 107 measures a tertiary resonant frequency of the sound at this time. A Young's modulus is calculated from the diameter, weight read by a controller part 108, natural frequency and length. The log is sorted by color on the basis of a strength class.

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INPADOC None  
Legal Status:

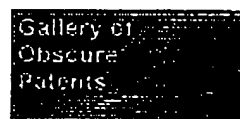
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**Family:**

PDF	Publication	Pub. Date	Filed	Title
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<input checked="" type="checkbox"/>	JP2987498B2	1999-12-06	1997-08-12	
2 family members shown above				

Other Abstract  
Info:

DERABS G1999-235928 DERABS G1999-235928



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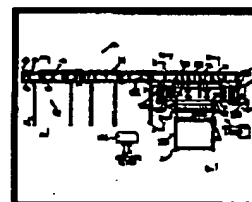
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## Derwent Record

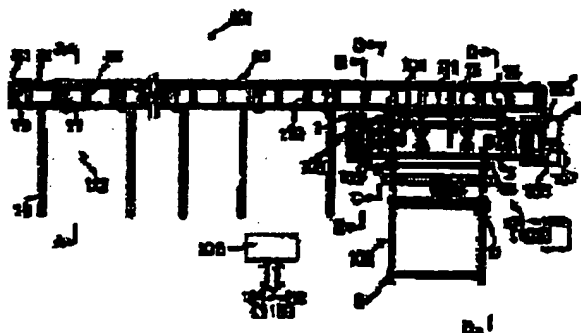
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- ⚙ Derwent Title: **Log grading apparatus for wooden material - has controller that performs strength count of log based on measured diameter, length and weight values**
- ⚙ Original Title: ☒ **JP11064306A2: APPARATUS FOR CLASSIFYING LOG**
- ⚙ Assignee: **KAGOSHIMA KEN Non-standard company  
YAMASA MOKUZAI KK Non-standard company**
- ⚙ Inventor: **None**
- ⚙ Accession/  
Update: **1999-235928 / 200003**
- ⚙ IPC Code: **G01N 29/12 ; B07C 5/34 ; G01N 3/30 ; G01N 33/46 ;**
- ⚙ Derwent Classes: **S03; P43;**
- ⚙ Manual Codes: **S03-E08A(Flaw detection) , S03-E14D7(Resins, plastics, rubber, leather, wood) , S03-F02E(By applying impulsive forces)**



⚙ Derwent Abstract: (JP11064306A) Novelty - An intrinsic frequency measuring unit (107) and a damage measuring apparatus (106) are provided. A controller (108) performs strength count of wooden log, based on strength and weight values measured by measurement units (113,104,105,105'). The logs are classified, based on signal generated from controller.  
 Use - For wooden material.  
 Advantage - The strength of wooden log is clearly grasped by user as color classified display is performed. Description of Drawing(s) - The figure shows plan view of log grading apparatus. (104,105,105',113) Measurement units; (106) Frequency measuring apparatus; (107) Frequency measuring apparatus; (108) Controller.

⚙ Images:



Dwg.1/10

⚙ Family:

PDF Pat nt	Pub. Date	Derwent Update	Pages	Language	IPC Code
<input checked="" type="checkbox"/> <b>JP11064306A</b> *	1999-03-05	199920	9	English	G01N 29/12
Local appls.: <u>JP1997000217320</u> Filed:1997-08-12 (97JP-0217320)					
JP2987498B2 =	1999-12-06	200003	9	English	G01N 29/12
Local appls.: Previous Publ. <u>JP11064306</u> (JP 11064306)					
<u>JP1997000217320</u> Filed:1997-08-12 (97JP-0217320)					

INPADOC Legal Status: Non

Priority Number:

Applicati n Number	Filed	Original Title
JP1997000217320	1997-08-12	APPARATUS FOR CLASSIFYING LOG

Title Terms: LOG GRADE APPARATUS WOOD MATERIAL CONTROL PERFORMANCE STRENGTH COUNT LOG BASED MEASURE DIAMETER LENGTH WEIGHT VALUE

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